

Appln. No.: 10/690,117
Amendment Dated March 20, 2006
Reply to Office Action of December 20, 2005

NSG-209US2

Amendments to the Drawings:

The attached sheets of drawings include changes to Figures 1, 12, 17C and 18. These sheets replace the original sheets.

Attachment

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Remarks/Arguments:

Claims 1-3 and 6 have been amended. No new material is introduced herein. Claim 4 has been cancelled. Claims 1-3 and 5-6 are pending.

The drawings were objected to because Fig. 1 and 12 do not include a "PRIOR ART" label. Figures 1 and 12 have been amended accordingly. Applicants respectfully request that the objection to Figs. 1 and 12 be withdrawn.

The drawings were objected to under 37 CFR 1.83(a). Namely, that claim 1 includes a feature of an "uneven portion on a front surface on the side on which the light transmitting original is placed" and that claim 2 includes a feature of a "projection having a periodic array on a front surface on which the light transmitting original is placed," that are not shown in the Figures. Figs. 17C and 18 have been amended such that element 2d shows an uneven surface. Support for the amendment to Figs. 17C and 18 can be found, for example, p. 38, line 9-p. 45, line 22. One of skill in the art would thus recognize that Element 2d may represent an "uneven portion" or a "projection having a periodic array." Accordingly, Applicants respectfully request that the objection to the drawings under 37 CFR 1.83(a) be withdrawn.

The Disclosure has been amended to clarify that the features shown in the Figures are not to scale and are arbitrarily expanded or reduced for clarity. The Disclosure has also been amended to clarify a typographical error on p. 42, line 11. These amendments do not add new matter.

The Abstract was objected to as being non-descriptive of the claimed invention. The Abstract has been amended accordingly. Applicants respectfully request that the objection to the Abstract be withdrawn.

The Disclosure was objected to because of an informality on page 3, line 15. The disclosure has been amended accordingly. Applicants respectfully request that the objection to the disclosure be withdrawn.

Claims 2-6 were objected to. Namely, that line 2 of claim 2 includes the phrase "a area light source". Claim 2 has been amended accordingly. Applicants respectfully request that the objection to claims 2-6 be withdrawn. Claim 6 has also been amended to correct a minor error. No new matter is added by this amendment.

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Claim 4 was objected to under 37 CFR §1.75 as failing to conform to the invention as set forth in the remainder of the specification. Namely, that claim 4 is written in an alternative form which may lead to interpretation of the claim in several different ways. The features of claim 4 have been included in claims 1 and 2. Claim 4 has been cancelled. Accordingly, Applicants respectfully request that the objection to claim 4 under 37 CFR §1.75 be withdrawn.

Claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Applicants admitted prior art (AAPA) and Ishikawa et al. (U.S. Pat. No. 6,128,105). Claim 4 has been cancelled. Claims 1 and 2 are not subject to rejection under 35 U.S.C. § 103(a) in view of AAPA and Ishikawa because neither AAPA, Ishikawa et al. nor their combination disclose or suggest that "an average coarseness of a center line Ra of the original base having said uneven portion ranges $0.02 \mu\text{m} \leq Ra \leq 1.0 \mu\text{m}$ " as required by amended claim 1. Amended claim 2 includes a similar recitation. Namely, that "an average coarseness of a center line Ra of the original base having said projection having the periodic array formed on the surface thereof ranges $0.02 \mu\text{m} \leq Ra \leq 1.0 \mu\text{m}$." Claims 1 and 2 have been amended to include the features of claim 4. Accordingly, no new matter is introduced herein.

AAPA discloses, in Figure 1, an image reading apparatus including a contact image sensor unit 61. An area light source 65 reads a light transmitting original 64 placed on original base 63 by irradiating light from the area light source 65 and receiving transmission light. (Page 3, line 6-26). AAPA does not disclose or suggest that the original base "has an uneven portion on a front surface on the side on which the light transmitting original is placed." AAPA thus cannot disclose or suggest that "an average coarseness of a center line Ra of the original base having said uneven portion ranges $0.02 \mu\text{m} \leq Ra \leq 1.0 \mu\text{m}$." Thus, AAPA does not include all of the features of claim 1.

Ishikawa et al., in Fig. 13, disclose a plate glass 82 having an uneven subject-sheet receiving area in contact with a subject sheet 1 (Col. 6, lines 22-29) used to reduce adhesion by the subject sheet (Col. 6, lines 43-47). Ishikawa et al. further disclose that a depth of unevenness, Δx , is greater than 4λ in order to avoid optical interference (Col. 4, lines 66-Col. 5, line 4). The image reading unit of Ishikawa includes red, green and blue LEDs where the wavelength of red light is used for the optical interference relationship (Col. 5, lines 15-20). Ishikawa et al. do not disclose or suggest that "an average coarseness of a center line Ra of the

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original base having said uneven portion ranges $0.02 \mu\text{m} \leq Ra \leq 1.0 \mu\text{m}$," as required by Applicants claim 1. According to the $\Delta x > 4\lambda$ relationship of the Ishikawa patent, if the wavelength of red light is 650 nm, the depth of unevenness should be greater than 2.6 μm . Furthermore, if the wavelength of violet light is 400 nm, the depth of unevenness should be greater than 1.6 μm . Both of these values are outside of the $0.02 \mu\text{m} \leq Ra \leq 1.0 \mu\text{m}$ range of Applicants' claim 1. Thus, Ishikawa et al. do not include all of the features of claim 1.

Because neither AAPA, Ishikawa et al. nor their combination disclose or suggest all of the limitations of claims 1 and 2, these claims are not subject to rejection under 35 U.S.C. §103(a) as being unpatentable over AAPA and Ishikawa et al. Claims 3, 5 and 6 depend from claims 1 or 2. Accordingly, claims 3, 5 and 6 are not subject to rejection under 35 U.S.C. §103(a) as being unpatentable over AAPA and Ishikawa et al. for at least the same reasons as the claims from which they depend.

The prior art made of record but not applied has been considered but does not affect the patentability of the claims.

In view of the foregoing amendments and remarks, Applicants request that the Examiner reconsider and withdraw the objections to the drawings, the objection to the Abstract, the objection to the Disclosure, the objection to claims 2 through 6 and the rejection of claims 1-6.

Respectfully submitted,


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KNN/ap/pb
Attachments: Figure(s) 1, 12, 17C and 18 (4 sheets)
Abstract
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The Director is hereby authorized to charge or credit Deposit Account No. 18-0350 for any additional fees, or any underpayment or credit for overpayment in connection herewith.

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office (571-273-8300) on the date shown below. March 20, 2006



Patricia C. Boccia

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BEST AVAILABLE COPY**Amendment to the Abstract:**

The Abstract has been amended. A revised Abstract is attached.

An image reading apparatus includes a line light source having a light guide plate and red, green, and blue LEDs, for a light transmitting original, and a contact image sensor unit for detecting light from the line light source. The light transmitting original is arranged between the line light source and the contact image sensor unit. The light transmitting original is read by moving the line light source and the contact image sensor unit relative to the light transmitting original. The line light source is moved interlockingly with the contact image sensor unit by the attraction between a magnet provided at both ends of the line light source in the longitudinal direction thereof and a magnet provided at both ends of the contact image sensor unit in the longitudinal direction thereof. of a contact image sensor type includes an area light source. The image reading apparatus is used for reading a light transmitting original placed on an original base by irradiating light thereto from the area light source and receiving transmission light. The original base has an uneven portion on a front surface on the side on which the light transmitting original is placed so that the adhesion of the light transmitting original to the original base is prevented upon placing the light transmitting original on the original base. The uneven portion does not effect optical characteristics for reading the light transmitting original.

Attachment